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Re: Recent trends in and preparedness for extreme weather events

As the peak conservation body for South Australia, the Conservation Council of South Australia (Conservation Council SA) welcomes the opportunity to comment on the **Recent trends in and preparedness for extreme weather events**.

Conservation Council SA is an independent, non-profit and strictly non-party political organisation representing around 50 of South Australia's environment and conservation organisations and their supporters. Conservation Council SA has developed a comprehensive view of environment policy in "South Australia in a Changing Climate: A Blueprint for a Sustainable Future"[1] This document sets out, at a strategic level, policy positions in six key environmental areas.

I would also be happy to meet with you or your representatives to discuss these matters in more detail.

Yours sincerely

Tim Kelly

Chief Executive

[1] http://www.conservationsa.org.au/blueprint.html

Conservation Council of SA comments for the Inquiry into Recent trends in and preparedness for extreme weather events.

(a) recent trends on the frequency of extreme weather events, including but not limited to drought, bushfires, heatwaves, floods and storm surges;

The Conservation Council of SA understands that recent trends of extreme weather events nationally and globally are in line with the scientific consensus and trends of climate change caused by anthropogenic greenhouse gas emissions.

To plan and adequately respond to current changes and the even greater forecasted extremes (based on current high emissions), there needs to be greater bipartisan support across all levels of governments. Cooperation between and across governments is needed to minimise the politics and rhetoric of the climate change policy and to better respond to the challenge.

(b) based on global warming scenarios outlined by the Intergovernmental Panel on Climate Change and the Commonwealth Scientific and Industrial Research Organisation of 1 to 5 degrees by 2070

(i) projections on the frequency of extreme weather events, including but not limited to drought, bushfires, heatwaves, floods and storm surges,

Projections should now be based on the scenario of high emissions A1FI scenario or equivalent. There is no useful planning or policy purpose to introduce wide ranges of human behaviour in addition to the uncertainty range of modelled global temperature outcomes. Previous approaches such as selecting a mid point between A1FI behaviour and B1 behaviour (as adopted for the Murray Darling Sustainable Yields Project) result in excessively wide ranging results that tend to paralyse the ability to prepare adequate plans or decision response

Using Australia as an example of all nations, and given Australia's addiction to coal exports and its willingness to now embrace a rush towards unconventional gas sources, there does not appear to be a meaningful commitment to transition away from fossil fuels. Therefore, there is virtually no hope of a responsible human response to achieve a low emissions scenario in an adequate timeframe. Until low emissions behaviour is adopted, the high emissions scenario should be used.

We welcome that the recent OzCoasts sea level rise maps now show the A1FI scenario as the mid range rather than an extreme scenario, yet are concerned that the B1 scenario is also shown. In the context of adaptation planning, the B1 scenario does not reflect human behaviour at this stage.

Extreme events

The Conservation Council supports the consideration of the frequency and severity of extreme weather events including those mentioned above. We believe that additional effort should be made in assessing the regional changes that may occur over the longer term and the impacts that these may have in regard to:

- water supply and reliability,
- risk of desertification and vegetation change and preparedness for potential extreme erosion events,
- the extent of relocation of human settlements from within and from beyond Australia.

(ii) the costs of extreme weather events and impacts on natural ecosystems, social and economic infrastructure and human health, and (iii) the availability and affordability of private insurance, impacts on availability and affordability under different global warming scenarios, and regional social and economic impacts;

Assessing the costs of climate change on the community must be undertaken in a holistic manner that does not ignore significant cost of adaptation . Costs must also include changes to agricultural practices, land productivity and the risk to food security. These costs can include the increased cost to recover from more frequent and severe extreme events, but must also include the cost of responding to more subtle yet permanent changes that will impact on agricultural systems, human settlements and the design of infrastructure that is more resilient to cope with extremes.

Given the importance of ecosystem resilience in a changing climate and in mitigating the impacts of extreme weather events, it is particularly important that the costs associated with ecosystem retention, resilience, conservation and restoration are included. This is in addition to the costs of restoration and remediation of ecosystems following an extreme event.

The cost of responding to a changing fire risk involves aspects of prevention, fuel reduction near assets and settlements, recovery after extreme events and disasters, compliance with new standards that better cope with the risks. Similarly, the cost of construction and operation of desalination plants can to a significant extent be attributed to the risk of climate change impacts on water security.

The cost of protecting human health must consider the need for additional measures to protect and assist communities during enhanced heatwaves,

floods and prolonged drought. In addition health impacts of changing and expanded disease vectors need to be taken into account.

The costs of relocating communities in the event a natural disaster rendering an area inhabitable need to be taken into account.

(**c) an assessment of the preparedness of key sectors for extreme weather events, including major infrastructure (electricity, water, transport, telecommunications), health, construction and property, and agriculture and forestry;**

The Conservation Council fully supports a more coordinated approach with a level of independence to assess the preparedness of extreme weather events on key infrastructure. The failure of infrastructure to withstand current extreme weather events (particularly during flooding and heat waves) suggests that in many cases infrastructure is not yet designed to cope with a changing climate. A set of simple principles should be adopted to test infrastructure resilience against extreme events.

Electricity

- Power poles (particularly wooden poles) and wires should not fail and cause fires during heat waves
- Transformers need to be able to operate in their environment at all times

Health systems and emergency services

- The primary health of people in extreme hot or cold conditions will become a higher priority.
- Hospitals and health centres need to be resourced and supplied adequately to be prepared for extreme events
- Distribution and availability of health resources

Transport

- Public transport systems must be designed to protect the wellbeing of people including where people board and depart during extreme heat.
- The flood risk on transport systems (particularly at a local government scale) needs to be planned for.
- Rail will need to be designed to operate during hotter conditions.

Occupied structures

- Must be built to offer better resilience against extreme events and fire.
- Ability to relocate or temporarily house communities in the event of residences being destroyed.

- Human settlements should be located away from areas that are or will become will be flood risk areas

Water

- Water availability in the event of an extreme weather event
- Emergency water supplies
- Decontamination of water supplies after an extreme event

Telecommunication

- Ability to cope with peak loads
- Heat resilience of infrastructure
- Emergency infrastructure in the event of an extreme weather event
- Communication of extreme weather events and updates

Agriculture

- Humane processes and procedures for the treatment of stock injured during an extreme weather event. For example it was reported during the recent Tasmanian bushfires that farmers were having wait until insurance companies could examine injured stock before they could be humanely put down.

(**d) an assessment of the preparedness and the adequacy of resources in the emergency services sector to prevent and respond to extreme weather events;**
Emergency services cannot prevent extreme weather events. Rather, actions such as targeted fuel reduction strategies can minimise the impacts of fire. Good planning can ensure that communities are not built against high fire risk areas such as heavy native vegetation, which then requires the removal or fuel reduction of the native vegetation to reduce the risk. Good planning can ensure that occupied structures are not built in flood prone areas, and low lying coastal areas.

(e) the current roles and effectiveness of the division of responsibilities between different levels of government (federal, state and local) to manage extreme weather events;

Extreme weather events cannot be managed. What can be managed is how we prepare and respond to severe weather events, and to severe weather emergencies.

It is very important that there be a mix of a strategic oversight and local input into preparing for and responding to extreme weather events. At a local level, there can often be an over or mis-targeted response to prevent a re-occurrence of an event, whilst the broader lessons are not heeded. By now, the broader lessons should have been learned to prevent the approval of sub divisions for occupied structures in locations that are flood prone, storm surge prone or exposed to high fire danger risks (particularly where there are insufficient reduced fuel buffer zones and asset protection zones.

(f) progress in developing effective national coordination of climate change response and risk management, including legislative and regulatory reform, standards and codes, taxation arrangements and economic instruments;

(g) any gaps in Australia's Climate Change Adaptation Framework and the steps required for effective national coordination of climate change response and risk management; and

A national climate change response and risk management approach would integrate the planning for adaptation and mitigation in the same exercise. This has not happened and instead there is a tendency for the disintegration for adaptation from the need to reduce emissions leading to mal-adaptation responses. There is no long term solution in simply trying to turn up the air conditioning to respond to the climate risk. Nor is there any confidence that a weak carbon price acting alone can reduce emissions across the economy at the rate required. Comprehensive parallel and complementary measures to reduce emissions must be integral with climate change adaptation strategies. Our new infrastructure and human settlements must be planned to be both resilient and of low greenhouse impact. If this cannot be achieved, the cost to adapt becomes higher and the ability to adapt will be further diminished.

The response should also include how the adaptation response will be undertaken in the context of other risks such as population, peak oil, peak fertiliser and rising carbon costs .